Focused Integration with the MSCS

In addition to the 12 scientific uncertainties identified in the Strategic Plan, CALFED's implementation plan and the projects selected in FY01 will be guided by the goals of the ERP and the priorities of the Multi-species Conservation Strategy (MSCS). The first ecosystem restoration goal in the Strategic Plan is to "achieve recovery of at-risk native species dependent on the Delta and Suisun Bay as the first step toward establishing large, self-sustaining populations of these species; support similar recovery of at-risk native species in San Francisco Bay and the watershed above the estuary; and minimize the need for future endangered species listings by reversing downward population trends of native species that are not listed." The MSCS provides the framework for compliance with the Federal and state Endangered Species Acts for the CALFED program. Work on the MSCS has identified several types of ERP actions that are especially necessary, early in stage 1A of CALFED implementation, to ensure this ERP goal can be met. In addition, implementation of these actions will raise the environmental baseline for these species, an important basis for providing ESA assurances. As a result, CALFED is soliciting focused proposals to implement these actions.

The MSCS/ERP actions to be addressed in this solicitation are:

A. Protection and restoration of riparian habitat along the lower San Joaquin River and associated channels and sloughs (such as, but not limited to, Paradise Cut, Middle River, Salmon Slough, and Tom Paine Slough). These projects should be designed and sized to provide multiple ecosystem benefits, including habitat for native fishes, riparian mammals, and migratory songbirds, in the riparian zone. Successful implementation would considerably improve on the existing conditions for several MSCS and ERP species, including delta smelt, Sacramento splittail, riparian brush rabbit, riparian woodrat, least Bell's vireo, little willow flycatcher, western yellowbilled cuckoo, and Swainson's hawk.

B. Implementation of projects and focused research designed to reduce the adverse effects of nonnative invasive species on listed fish, wildlife and plants. Projects would include Eradication of non-native *Spartina* spp. in tidal marshes of San Pablo Bay, evaluation of methods for containment and control of *Egeria* in the Delta, and reduction of influx of non-native aquatic species in ship ballast water.

C. Restore tidal action to wetlands in Suisun Marsh. This effort should be prioritized in the western and northern portions of the marsh. Projects should be designed to provide habitat for native fish as well as salt marsh resident mammals and birds, and rare plants. Some projects should include the experimental reintroduction of rare plants into suitable habitat. MSCS and ERP species that may benefit include delta smelt and its critical habitat, Sacramento splittail, longfin smelt, salmon, California clapper rail, black rail, salt

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marsh harvest mouse, Suisun shrew, Suisun song sparrow, salt marsh common yellowthroat, tri-colored blackbird, Suisun thistle, soft bird's-beak, Mason's lilaeopsis, and Suisun marsh aster.

D. Restore tidal and seasonal wetlands north of San Pablo Bay between the Napa and Petaluma rivers. Projects should be designed to provide habitat for native fish as well as resident mammals, birds, and rare plants. ERP and MSCS species that would benefit include delta smelt, longfin smelt, Sacramento splittail, salmon, green sturgeon, California clapper rail, black rail, salt marsh common yellowthroat, salt marsh harvest mouse, San Pablo California vole, soft bird's-beak, and Mason's lilaeopsis.

E. Restore tidal wetlands in the northern Delta, including the southern portion of Yolo Bypass. These projects should be designed to provide multiple ecosystem benefits, with a focus on spawning habitat for native fishes. MSCS and ERP species that would benefit include Sacramento splittail, delta smelt, and chinook salmon.

F. Restore a mosaic of seasonal wetlands, permanent wetlands, and associated uplands adjacent to the Sacramento River, northern Delta sloughs, and in the northern portion of Yolo Bypass. These projects should be designed to provide the habitat requirements of all life stages of native reptiles, especially giant garter snakes. In addition, and depending on the design and location of the projects, other MSCS and ERP species would benefit, such as shorebirds, waterfowl, riparian songbirds, and resident and anadromous fish.

G. Conduct special status species research, surveys, and monitoring to address critical uncertainties in the Delta and Suisun Marsh. Compared to resident and anadromous fish, the distribution and abundance of several other important ERP and MSCS species is not well known. These projects may include studying the efficacy of reintroduction programs for special-status plant species, and special-status species surveys. This information is important to guide ecosystem restoration projects so that they can provide for the protection and conservation of these species, and to ensure that projects do not inadvertently contribute to the further local decline of these species. Species for which this information is critically important include salmon, giant garter snake, riparian brush rabbit, riparian woodrat, and various rare plants. The best projects will provide information about the species abundance, distribution, and habitat use throughout its range in the Delta and Suisun Marsh.

H. Vernal pool protection and conservation. Projects should be designed to protect significant portions of the remaining vernal pool complexes in and near the Delta, including but not limited to those in Montezuma wetlands and near Jepson Prairie. ERP and MSCS species that would benefit include vernal pool fairy shrimp, Conservancy fairy shrimp, Contra Costa goldfields, Sacramento Orcutt grass, Solano grass (aka Crampton's tuctoria), Colusa grass, delta green ground beetle, and vernal pool tadpole shrimp.

I. Restore inland dune scrub habitat in the Delta. Projects should focus on the restoration of inland dunes adjacent to the existing Antioch Dunes National Wildlife Refuge, or other dune areas not currently managed as habitat, using dune restoration and management techniques pioneered at the refuge. The primary goal of these projects is to expand the range of the ERP and MSCS species dependent on this habitat type, especially Lange's metalmark butterfly, Antioch Dunes evening-primrose, and Contra Costa wallflower.

J. Implement fish screening projects on high priority agricultural diversions in the Delta, Suisun Marsh, and the Sacramento and San Joaquin rivers, their tributaries and bypasses to reduce entrainment and demonstrate retrievable screen technology, conical screens, and bypass systems.

K. Restore a mosaic of tidal emergent wetlands, seasonal wetlands, non-tidal emergent wetlands, and associated uplands totaling between 3,000 and 5,000 acres in the lower San Joaquin River and southern Delta region. Projects should be designed to provide habitat for native fish as well as resident mammals and birds, and rare plants. MSCS and ERP species that may benefit include delta smelt and its critical habitat, splittail, longfin smelt, Chinook salmon, black rail, Swainson's hawk, greater sandhill crane, tri-colored blackbird, shorebirds, waterfowl, Mason's lilaeopsis, and Delta tule pea.

L. Manage the hydrologic regime in the Delta and regulated Central Valley streams to improve streamflows, net Delta channel flows, and temperatures for native anadromous and estuarine fish species. The primary goals would include (1) protect and enhance ecological functions within stream and Delta channels, (2) provide for historic net flow patterns within Delta waterways, (3) provide channel and sediment maintenance flows below reservoirs, (4) provide suitable spawning, rearing, and passage conditions for migratory fish species, and (5) provide suitable temperature conditions below impassable dams for anadromous fish populations.

M. Provide or improve fish passage at dams and other structures in Central Valley stream channels. The primary goals include (1) restoring or expanding the range of anadromous fish habitat to upstream areas in Central Valley tributaries, and (2) eliminate blockage and delay at existing ineffective fish ladders and other manmade structures.

N. Conduct monitoring, assessment, and research to improve our understanding of the ecological and physical processes affecting the natural resources of the Central Valley. Goals would include (1) improving and expanding the inventory and monitoring of resources, (2) assessment to better define correlations and relationships, and (3) research to establish the mechanisms that explain observed correlations

O. Improve and restore riparian areas, spawning and rearing habitats for anadromous fish in Sacramento Valley rivers. Acquire, restore, and manage land along the Sacramento River, San Joaquin River and their tributaries to provide a mosaic of riparian, seasonal

wetland and upland habitats. Depending upon where the projects are implemented and how the projects are designed, these actions would benefit a number of ERP and MSCS species, such as rearing anadromous fish, western pond turtle, valley elderberry longhorn beetle, giant garter snake, California red-legged frog, Swainson's hawk, western yellow-billed cuckoo, waterfowl, and riparian songbirds. Suitable restoration projects would include restoration of Sacramento, Feather, Yuba, and lower Stanislaus River channel floodplains, areas along the Colusa Drain. Gravel replenishment projects would also provide benefits to anadromous fish spawning.

Proposals to address these needs should be prepared consistent with all the other requirements of this PSP, including reference to the scientific uncertainties addressed by the project, a conceptual model explaining the scientific rationale for the project, identified measures to assess the success of the project, and appropriate monitoring. Proposals should clearly identify which, if any, of these focused actions are addressed in the project.

It is also appropriate to submit proposals that, consistent with the other requirements of this PSP, address the other CALFED Ecosystem Restoration Goals. The at-risk native species goal, and integration with the MSCS, are emphasized here because of the critical nature of these problems and their importance to the overall CALFED assurances package. If suitable proposals are not received through this PSP, CALFED will develop directed projects to implement these actions.